

## WHAT IS CLAIMED IS:

- 1. A display devide comprising:
  display means for forming information; and
  optical means for guiding the light from said
  display means to the eye, said optical means including
  a curved face for totally reflecting the light.
- 2. A display device according to claim 1, wherein said optical means includes, in the order in the

  10 proceeding direction of light, an entrance face for introducing the light from said display means, said curved face and a reflecting face for reflecting the light toward the eye, wherein the light reflected by said reflecting face is transmitted by said curved face and reaches the eye.
  - 3. A display device according to claim 1, wherein said curved face has variable optical power depending on the azimuthal angle.

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- 4. A display device according to claim 1, satisfying a condition  $|\alpha| \le 20^{\circ}$  wherein  $\alpha$  is the angle between the tangential line to said curved face at the vertex thereof and a line perpendicular to the optical axis of the eye.
  - 5. A display device according to claim 1, further

comprising:

illumination means for illuminating the eye; and light-receiving means for receiving the light reflected from the eye, for detecting the visual line thereof.

6. A display device according to claim 5, further comprising:

control means for controlling the display state of said display means, according to the light receiving state of said photosensor means.

- 7. A display device according to claim 2, wherein said reflecting face is a half-transmitting face.
- 8. A display devide according to claim 2, wherein said reflecting face has variable optical power depending on the azimuthal angle.
- 20 9. A display device comprising:

information forming means for forming an
information;

optical means for guiding a light of said information forming means to an eye, in which said optical means have a reflecting curved face decentered having a positive optical power;

illuminating means for illuminating said eye;

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converging means for converging a light of said illuminating means reflected from said eye; and

detecting means for receiving a light from said converging means to detect a state of said eye;

wherein where an imaging magnification of said converging means is  $\beta$ , a following condition is satisfied,

 $0.02 < |\beta| < 0.18.$ 

10. A display device according to claim 9, wherein said reflecting curved face has variable optical power depending on the azimuthal angle.

 $Adda^3>$ 

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